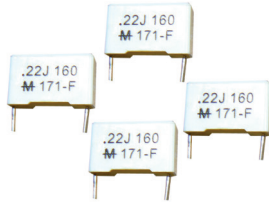


Type 171 Radial Leaded Metallized Polypropylene

Radial Box Metallized Polypropylene Capacitors



Type 171 radial leaded, box, metallized polypropylene capacitors are available in five pitch sizes and have a flame retardant case and epoxy encapsulant that meets UL94V-0. The Type 171 is an excellent choice for applications requiring low dielectric losses, high insulation resistance in an AC or DC environment. The polypropylene dielectric gives this capacitor excellent pulse rise time (dv/dt) performance.

Highlights

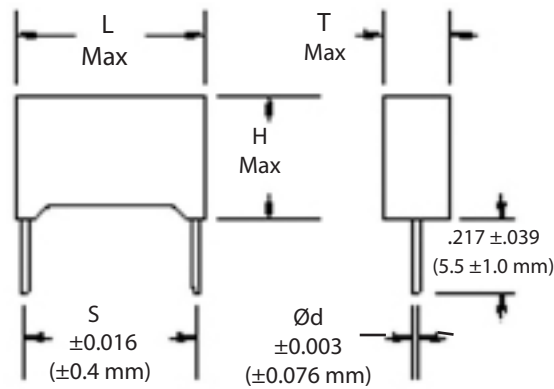
- High dv/dt
- Low leakage
- Radial leaded (7.5, 10, 15, 22.5, 27.5 mm pitch)
- Flame retardant case and encapsulant meets UL94V-0
- Non-inductively wound

Specifications

Capacitance Range	0.0022 to 3.3 μ F					
Capacitance Tolerance	\pm 5%, \pm 10%, \pm 20%					
Rated Voltage	160 to 630 Vdc (90 to 250 Vac, 60 Hz)					
Operating Temperature Range	-55 °C to +105 °C (derate linearly to 50% rated voltage from 85 °C to 105 °C)					
Dielectric Withstand Voltage	1.6 x rated voltage for 2 s @ +25 °C \pm 5 °C					
Dissipation Factor @ 120 Hz, +25 °C	tg δ x 10 ⁻⁴ at +25 °C \pm 5 °C					
	kHz	C \leq 0.1 μF	0.1 μF < C \leq 1 μF	C > 1 μF		
	1	\leq 6	\leq 6	\leq 6		
	10	\leq 10	\leq 20	—		
	100	\leq 30	—	—		
Insulation Resistance	100,000 M Ω x μ F, 200,000 M Ω Min.					
Self Inductance	2 mm lead length - total self inductance					
	Pitch (mm)	7.5	10	15	22.5	27.5
	L (nH) \approx	8	9	10	18	18
Life Test	2000 hrs @ 85 °C 1.25 x Vn					
Damp Heat Test	95% RH @ +40 °C for 56 days					
Soldering	260 °C \pm 5 °C for 10 s \pm 1 s					
Long Term Storage Stability	Δ C/C \leq \pm 0.5% after 2 years					
Maximum Pulse Rise Time dv/dt (V/ μ)	Lead Spacing (Pitch)					
	Vn	7.5	10	15	22.5	27.5
	160	5.5	4	2	1.5	1
	250	15	11	7	4	3
	400	35	20	10	5.5	5
	630	55	30	15	8	7
If the working voltage (V) is less than the nominal voltage (Vn), the capacitor can work at higher dv/dt. In this case, the maximum value allowed is obtained by multiplying the above value (See table dv/dt) with the ratio Vn/V						
RoHS Compliant						

Type 171 Radial Leaded Metallized Polypropylene

Outline Drawing



Ratings

Cap (µF)	Catalog Part Number	Inches (mm)					ESR (mΩ) 20 kHz to 100 kHz	IRMS (Amps)			
		L Max	T Max	H Max	S (Pitch)	Ød		25 °C	45 °C	85 °C	
160 Vdc / 90 Vac 60 Hz											
0.033	171333*160B-F	0.413 (10.5)	0.157 (4.0)	0.374 (9.5)	0.295 (7.5)	0.024 (0.6)	Not applicable. These capacitance values are not customarily used in switched-mode power supplies				
0.047	171473*160B-F	0.413 (10.5)	0.157 (4.0)	0.374 (9.5)	0.295 (7.5)	0.024 (0.6)					
0.047	171473*160C-F	0.512 (13.0)	0.157 (4.0)	0.374 (9.5)	0.394 (10)	0.024 (0.6)					
0.068	171683*160C7-F	0.413 (10.5)	0.197 (5.0)	0.433 (11.0)	0.295 (7.5)	0.024 (0.6)					
0.068	171683*160D-F	0.512 (13.0)	0.197 (5.0)	0.433 (11.0)	0.394 (10.0)	0.024 (0.6)					
0.1	171104*160C7-F	0.413 (10.5)	0.197 (5.0)	0.433 (11.0)	0.295 (7.5)	0.024 (0.6)					
0.1	171104*160E-F	0.512 (13.0)	0.236 (6.0)	0.472 (12.0)	0.394 (10.0)	0.024 (0.6)					
0.15	171154*160D7-F	0.413 (10.5)	0.236 (6.0)	0.472 (12.0)	0.295 (7.5)	0.024 (0.6)					
0.15	171154*160E-F	0.512 (13.0)	0.236 (6.0)	0.472 (12.0)	0.394 (10)	0.024 (0.6)					
0.22	171224*160F-F	0.709 (18.0)	0.197 (5.0)	0.433 (11.0)	0.591 (15.0)	0.031 (0.8)					
0.33	171334*160G-F	0.709 (18.0)	0.236 (6.0)	0.472 (12.0)	0.591 (15.0)	0.031 (0.8)		37	3.7	3.1	1.4
0.47	171474*160H-F	0.709 (18.0)	0.295 (7.5)	0.531 (13.5)	0.591 (15.0)	0.031 (0.8)		33	4.1	3.5	1.6
0.68	171684*160L -F	1.043 (26.5)	0.236 (6.0)	0.591 (15.0)	0.886 (22.5)	0.031 (0.8)		26	5.5	4.7	2.6
1.0	171105*160N-F	1.043 (26.5)	0.335 (8.5)	0.669 (17.0)	0.886 (22.5)	0.031 (0.8)		20	6.1	5.1	3.1
1.5	171155*160O-F	1.043 (26.5)	0.394 (10.0)	0.748 (19.0)	0.886 (22.5)	0.031 (0.8)	18	6.3	5.7	3.3	
2.2	171225*160P-F	1.26 (32.0)	0.433 (11.0)	0.787 (20.0)	1.083 (27.5)	0.031 (0.8)	16	7.4	6.4	3.6	
3.3	171335*160Q-F	1.26 (32.0)	0.512 (13.0)	0.886 (22.5)	1.083 (27.5)	0.031 (0.8)					
250 Vdc / 90 Vac 60 Hz											
0.015	171153*250B-F	0.413 (10.5)	0.157 (4.0)	0.374 (9.5)	0.295 (7.5)	0.024 (0.6)	Not applicable. These capacitance values are not customarily used in switched-mode power supplies				
0.022	171223*250B-F	0.413 (10.5)	0.157 (4.0)	0.374 (9.5)	0.295 (7.5)	0.024 (0.6)					
0.022	171223*250C-F	0.512 (13.0)	0.157 (4.0)	0.374 (9.5)	0.394 (10)	0.024 (0.6)					
0.033	171333*250C-F	0.512 (13.0)	0.157 (4.0)	0.374 (9.5)	0.394 (10)	0.024 (0.6)					
0.047	171473*250D-F	0.512 (13.0)	0.197 (5.0)	0.433 (11.0)	0.394 (10)	0.024 (0.6)					
0.068	171683*250E-F	0.512 (13.0)	0.236 (6.0)	0.472 (12.0)	0.394 (10)	0.024 (0.6)					

* indicates capacitance tolerance, J = ±5%, K = ±10%, M = ±20%

Type 171 Radial Leaded Metallized Polypropylene

Ratings

Cap (μ F)	Catalog Part Number	Inches (mm)					ESR (m Ω) 20 kHz to 100 kHz	IRMS (Amps)						
		L Max	T Max	H Max	S (Pitch)	\varnothing d		25 °C	45 °C	85 °C				
250 Vdc / 90 Vac 60 Hz														
0.10	171104*250F-F	0.709 (18.0)	0.197 (5.0)	0.433 (11.0)	0.591 (15.0)	0.031 (0.8)	Not applicable							
0.15	171154*250G-F	0.709 (18.0)	0.236 (6.0)	0.472 (12.0)	0.591 (15.0)	0.031 (0.8)								
0.22	171224*250H-F	0.709 (18.0)	0.295 (7.5)	0.531 (13.5)	0.591 (15.0)	0.031 (0.8)								
0.33	171334*250L-F	1.043 (26.5)	0.236 (6.0)	0.591 (15.0)	0.886 (22.5)	0.031 (0.8)								
0.47	171474*250M-F	1.043 (26.5)	0.276 (7.0)	0.650 (16.5)	0.886 (22.5)	0.031 (0.8)								
0.68	171684*250Q-F	1.26 (32.0)	0.512 (13.0)	0.886 (22.5)	1.083 (27.5)	0.031 (0.8)	35	3.8	3.6	1.7				
1.0	171105*250P-F	1.26 (32.0)	0.433 (11.0)	0.787 (20.0)	1.083 (27.5)	0.031 (0.8)	32	4	3.8	1.9				
1.5	171155*250Q-F	1.26 (32.0)	0.512 (13.0)	0.886 (22.5)	1.083 (27.5)	0.031 (0.8)	28	4.4	4.4	3.2				
							26	5.1	4.9	3.5				
400 Vdc / 220 Vac 60 Hz														
0.0068	171682*400B-F	0.413 (10.5)	0.157 (4.0)	0.374 (9.5)	0.295 (7.5)	0.024 (0.6)	Not applicable. These capacitance values are not customarily used in switched-mode power supplies							
0.010	171103*400B-F	0.413 (10.5)	0.157 (4.0)	0.374 (9.5)	0.295 (7.5)	0.024 (0.6)								
0.010	171103*400C-F	0.512 (13.0)	0.157 (4.0)	0.374 (9.5)	0.394 (10.0)	0.024 (0.6)								
0.015	171153*400D-F	0.512 (13.0)	0.197 (5.0)	0.433 (11.0)	0.394 (10.0)	0.024 (0.6)								
0.022	171223*400D-F	0.512 (13.0)	0.197 (5.0)	0.433 (11.0)	0.394 (10.0)	0.024 (0.6)								
0.033	171333*400E-F	0.512 (13.0)	0.236 (6.0)	0.472 (12.0)	0.394 (10.0)	0.024 (0.6)								
0.047	171473*400F-F	0.709 (18.0)	0.197 (5.0)	0.433 (11.0)	0.591 (15.0)	0.031 (0.8)								
0.068	171683*400G-F	0.709 (18.0)	0.236 (6.0)	0.472 (12.0)	0.591 (15.0)	0.031 (0.8)								
0.10	171104*400H-F	0.709 (18.0)	0.295 (7.5)	0.531 (13.5)	0.591 (15.0)	0.031 (0.8)								
0.15	171154*400I-F	0.709 (18.0)	0.335 (8.5)	0.571 (14.5)	0.591 (15.0)	0.031 (0.8)								
0.22	171224*400N-F	1.043 (26.5)	0.335 (8.5)	0.669 (17.0)	0.886 (22.5)	0.031 (0.8)								
0.33	171334*400O-F	1.043 (26.5)	0.394 (10.0)	0.748 (19.0)	0.886 (22.5)	0.031 (0.8)								
0.47	171474*400P-F	1.26 (32.0)	0.433 (11.0)	0.787 (20.0)	1.083 (27.5)	0.031 (0.8)					32	5.7	5	2.2
0.68	171684*400Q-F	1.26 (32.0)	0.512 (13.0)	0.886 (22.5)	1.083 (27.5)	0.031 (0.8)					30	5.7	5.5	2.4
630 Vdc / 250 Vac 60 Hz														
0.0022	171222*630B-F	0.413 (10.5)	0.157 (4.0)	0.374 (9.5)	0.295 (7.5)	0.024 (0.6)	Not applicable. These capacitance values are not customarily used in switched-mode power supplies							
0.0022	171222*630C-F	0.512 (13.0)	0.157 (4.0)	0.374 (9.5)	0.394 (10.0)	0.024 (0.6)								
0.0033	171332*630B-F	0.413 (10.5)	0.157 (4.0)	0.374 (9.5)	0.295 (7.5)	0.024 (0.6)								
0.0033	171332*630C-F	0.512 (13.0)	0.157 (4.0)	0.374 (9.5)	0.394 (10.0)	0.024 (0.6)								
0.0047	171472*630B-F	0.413 (10.5)	0.157 (4.0)	0.374 (9.5)	0.295 (7.5)	0.024 (0.6)								
0.0047	171472*630C-F	0.512 (13.0)	0.157 (4.0)	0.374 (9.5)	0.394 (10.0)	0.024 (0.6)								
0.0068	171682*630D-F	0.512 (13.0)	0.197 (5.0)	0.433 (11.0)	0.394 (10.0)	0.024 (0.6)								
0.010	171103*630D-F	0.512 (13.0)	0.197 (5.0)	0.433 (11.0)	0.394 (10.0)	0.024 (0.6)								
0.015	171153*630E-F	0.512 (13.0)	0.236 (6.0)	0.472 (12.0)	0.394 (10.0)	0.024 (0.6)								
0.022	171223*630F-F	0.709 (18.0)	0.197 (5.0)	0.433 (11.0)	0.591 (15.0)	0.031 (0.8)								
0.033	171333*630G-F	0.709 (18.0)	0.236 (6.0)	0.472 (12.0)	0.591 (15.0)	0.031 (0.8)								
0.047	171473*630H-F	0.709 (18.0)	0.295 (7.5)	0.531 (13.5)	0.591 (15.0)	0.031 (0.8)								
0.068	171683*630I-F	0.709 (18.0)	0.335 (8.5)	0.571 (14.5)	0.591 (15.0)	0.031 (0.8)								
0.10	171104*630N-F	1.043 (26.5)	0.335 (8.5)	0.669 (17.0)	0.886 (22.5)	0.031 (0.8)								
0.15	171154*630O-F	1.043 (26.5)	0.394 (10.0)	0.748 (19.0)	0.886 (22.5)	0.031 (0.8)								
0.22	171224*630P-F	1.26 (32.0)	0.433 (11.0)	0.787 (20.0)	1.083 (27.5)	0.031 (0.8)								
0.33	171334*630Q-F	1.26 (32.0)	0.512 (13.0)	0.886 (22.5)	1.083 (27.5)	0.031 (0.8)								

* indicates capacitance tolerance, J = \pm 5%, K = \pm 10%, M = \pm 20%

Type 171 Radial Leaded Metallized Polypropylene

Notice and Disclaimer: All product drawings, descriptions, specifications, statements, information and data (collectively, the "Information") in this datasheet or other publication are subject to change. The customer is responsible for checking, confirming and verifying the extent to which the Information contained in this datasheet or other publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without any guarantee, warranty, representation or responsibility of any kind, expressed or implied. Statements of suitability for certain applications are based on the knowledge that the Cornell Dubilier company providing such statements ("Cornell Dubilier") has of operating conditions that such Cornell Dubilier company regards as typical for such applications, but are not intended to constitute any guarantee, warranty or representation regarding any such matter – and Cornell Dubilier specifically and expressly disclaims any guarantee, warranty or representation concerning the suitability for a specific customer application, use, storage, transportation, or operating environment. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by Cornell Dubilier with reference to the use of any Cornell Dubilier products is given gratis (unless otherwise specified by Cornell Dubilier), and Cornell Dubilier assumes no obligation or liability for the advice given or results obtained. Although Cornell Dubilier strives to apply the most stringent quality and safety standards regarding the design and manufacturing of its products, in light of the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies or other appropriate protective measures) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage. Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated in such warnings, cautions and notes, or that other safety measures may not be required.